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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,042	11/04/2003	Seiji Makita	107348-00382	3155
4372	7590	01/14/2005	EXAMINER	
AREN'T FOX KINTNER PLOTKIN & KAHN 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			BONCK, RODNEY H	
		ART UNIT		PAPER NUMBER
				3681

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/700,042	MAKITA ET AL.	
	Examiner	Art Unit	
	Rodney H. Bonck	3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 16 June 2004.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-4 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-4 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 16 June 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 06/16/04.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

The following is a first action on the merits of application Serial No.10/700,042, filed November 4, 2003.

Priority

Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon an application filed in Japan on July 17, 2002. A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on said application, since the United States application was filed more than twelve months thereafter.

Information Disclosure Statement

Receipt is acknowledged of the Information Disclosure Statement filed November 4, 2003. The cited documents have been considered.

Drawings

The drawings are objected to because reference character "M", referred to in line 2 of page 5, is not in the drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be

removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

It is noted that a proposed change to Fig. 2, adding the reference character "M", was filed June 16, 2004. The proposed change is approved. It is noted, however, that the new set of formal drawings submitted June 16, 2004 does not include the proposed change.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimoto et al.('972) in view of Ejiri et al.('516). Yoshimoto et al. disclose a power transmission device comprising a torque converter T and a clutch Cc disposed in series between an engine P and a gear transmission M (see lines 34-38, column 4). The Yoshimoto et al. device does not appear to disclose that the pump capacity of the torque converter is a maximum at a speed ratio equal to 0, decreasing in response to an increase in speed ratio. Ejiri et al. disclose a torque converter wherein capacity is a maximum at a speed ratio equal to zero (Fig. 5) and decreases at increased speed ratio to provide improved torque converter efficiency. It would have been obvious to use the torque converter configuration of Ejiri et al. in Yoshimoto et al., the motivation being to improve torque converter efficiency. Note that Ejiri et al. also disclose that the pump blade is disposed at an angle so that in the radially outward direction the blade approaches the direction of rotation.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimoto et al.('972) in view of Ejiri et al.('516) as applied to claims 1 and 2 above, and further in view of Trusov('243). The torque converter in Yoshimoto et al. does not

appear to include an inclination angle of the blade toward the direction of rotation of the pump decreasing from the inner periphery toward the outer periphery. Trusov provides a torque converter with a pump blade that decreases in angle toward the outer periphery, wherein the angle decreases rapidly on the outer peripheral side. It would have been obvious to provide this blade configuration in Yoshimoto et al., the motivation being to improve efficiency, as taught by Trusov (column 2, lines 47-50).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jandasek('148) discloses a torque converter with pump blades angled in the direction of rotation. Zeidler et al.('149) is cited to show the pump blade configuration of Fig. 39. Minowa et al.('873)(Figs. 9 and 10) and Hara et al.('794)(Fig. 5) show capacity decreasing from zero speed ratio. Iwasawa et al.('003) is cited to show the capacity variation in Figs. 6-8. Imasaka et al.(US 2004/0026201 A1) shows a torque converter and clutch configuration similar to that disclosed here.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney H. Bonck whose telephone number is (703)-308-2904. The examiner can normally be reached on Monday-Friday 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (703)-308-0830. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rodney H. Bonck
Primary Examiner
Art Unit 3681

rhb
January 10, 2005